

VSEPR TABLE

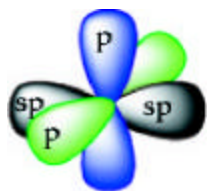
Regions of High Electron Density
(Bonded & Lone Pair Regions)

Molecular Structures and Examples.
The Lone Pairs have been omitted from the peripheral atoms.

Two: Linear

AX₂LP₀

AX₁LP₁



2 Bonding Regions:
Triple (1 σ & 2 π)
Single (1 σ)
0 Lone Pair Regions

2 Bonding Regions:
2 Double (1 σ & 1 π /per)
0 Lone Pair Regions

2 Bonding Regions:
Triple (1 σ & 2 π)
1 Lone Pair Region

Hybridization: sp

Linear: 180°

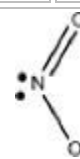
Linear: 180°

Linear: 180°

Three: Trigonal Planar

AX₃LP₀

AX₂LP₁



3 Bonding Regions:
1 Double (1 σ & 1 π) & 2 Single (1 σ each)
0 Lone Pair Regions

2 Bonding Regions:
1 Double (1 σ & 1 π) & 1 Single (1 σ)
1 Lone Pair Region

Hybridization:
sp²

Trigonal Planar: 120°

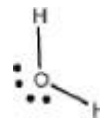
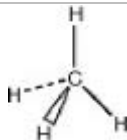
Bent: <120°

Four: Tetrahedral

AX₄LP₀

AX₃LP₁

AX₂LP₂



4 Bonding Regions:
4 Single (1 σ each)
0 Lone Pair Regions

3 Bonding Regions:
3 Single (1 σ each)
1 Lone Pair Region

2 Bonding Regions:
2 Single (1 σ each)
2 Lone Pair Regions

Hybridization:
sp³

Tetrahedral: 109.5°

Trigonal Pyramidal:
107°

Bent (Angular): 104.5°

VSEPR Table

Five: Trigonal Bipyramidal	AX ₅ LP ₀	AX ₄ LP ₁	AX ₃ LP ₂	AX ₂ LP ₃
	5 Bonding Regions: 5 Single (1 σ each) 0 Lone Pair Regions	4 Bonding Regions: 4 Single (1 σ each) 1 Lone Pair Regions	3 Bonding Regions: 3 Single (1 σ each) 2 Lone Pair Regions	2 Bonding Regions: 2 Single (1 σ each) 3 Lone Pair Regions
Hybridization: sp ³ d	Trigonal Bipyramidal: 120° & 90°	Seesaw: <120° & <90°	T-shaped: <90°	Linear: 180°
Six: Octahedral	AX ₆ LP ₀	AX ₅ LP ₁	AX ₄ LP ₂	
		5 Bonding Regions: 5 Single (1 σ each) 1 Lone Pair Regions	4 Bonding Regions: 4 Single (1 σ each) 2 Lone Pair Regions	
Hybridization: sp ³ d ²	Octahedral: 90°	Square Pyramidal: <90°	Square Planar: 90°	
Four: Square Planar	AX ₃ LP ₁			
	3 Bonding Regions: 3 Single (1 σ each) 1 Double (1 σ & 1 π) 1 Lone Pair Regions			
Hybridization: sp ² d	Square Planar: 90°			